

**SYNOPSIS OF  
NASA TIRE/RUNWAY FRICTION WORKSHOP**

**I. OBJECTIVES**

1. Obtain better understanding of different runway friction measurement procedures and factors influencing tire/runway friction performance.
2. Expand existing friction measuring vehicle correlation to include new devices
3. Provide opportunity to observe new test and pavement treatment equipment in operation
4. Evaluate different pavement roughness measuring devices
5. Identify methods to improve harmonization between different measurement devices and test procedures used throughout the world

**II. LOGISTICS**

WHEN: May 16-20, 2005

LOCATION: NASA Wallops Flight Facility on the eastern shore of Virginia near the town of Chincoteague. Wallops is located about 100 miles northeast of Norfolk, VA and about 150 miles southeast of Washington D.C.

ACCOMODATIONS: Some of the motels at nearby Chincoteague, VA are listed below:

The Refuge Motel 7058 Maddox Blvd	Phone: 757-336-5511
The Driftwood Motel 7103 Maddox Blvd	Phone: 757-336-6557
The Comfort Inn Suites 4195 N. Main Street	Phone: 757-336-3700
The Mariner Motel 6273 Maddox Blvd	Phone: 757-336-6565
Waterside Motor Inn 3761 Main Street	Phone: 757-336-3434
Hampton Inn & Suites 3785 N. Main Street	Phone: 757-336-1616

WALLOPS COORDINATOR: JOHN DICKERSON 757-824-1482

**III. TENTATIVE AGENDA**

Monday, May 16

- Introductions and overview presentations
- General description of different test procedures and equipment
- Description of test facilities at NASA Wallops Flight Facility
- Inspection of measurement equipment on hand for testing

Tuesday, May 17

- Demonstration of various test measurement equipment in operation
- Calibration and checkout of all friction/texture/roughness test equipment
- Start of coordinated friction vehicle testing and texture/roughness measurements

## WORKSHOP SYNOPSIS - Continued.

Wednesday, May 18

Continuation of friction vehicle testing and texture/roughness measurements  
Workshop social starting at 5 pm in Bldg. F3

Thursday, May 19

Continuation of friction vehicle testing and texture/roughness measurements

Friday, May 20

Completion of friction vehicle testing and texture/roughness measurements  
Final equipment calibration and checkout  
Final test data tabulation and verification by respective equipment operators  
Workshop summary and adjournment

## IV. CURRENT DATABASE

A. Friction measuring vehicles:

1. Instrumented Tire Test Vehicle (Truck)
2. Diagonal-Braked Vehicle
3. Mu-meter trailer
4. BV-11 skiddometer trailer
5. GripTester trailer
6. Surface friction tester
7. Runway friction tester
8. Tatra friction tester
9. ASTM E-274 skid trailer
10. Dynamic friction tester
11. Norsemeter variable slip friction tester
12. IMAG variable slip friction trailer
13. James Brake Index decelerometer vehicle
14. Portable helideck friction tester
15. Portable drag-slip tester
16. Penn State skid trailer
17. BV-14 skiddometer trailer

B. Texture measuring equipment:

1. Grease sample
2. Sand patch
3. Outflowmeter
4. British pendulum tester
5. Profilograph
6. Laser profilometer
7. Circular laser profilometer

C. Roughness measuring equipment

1. Static dipstick
2. Rolling dipstick
3. Laser profilographs (6)
4. Rod and level

D. Range of test surfaces

1. Concrete and asphalt pavements
2. Ungrooved and transversely grooved sections
3. Special aluminum plate (low friction) surface
4. Some shotpeened (Skidabrader) concrete sections (6)
5. Reference test surface panels (3 different textures)
6. Micro-surfacing overlays (6 surfaces)
7. Antiskid overlay treatment
8. Asphalt rejuvenated surfaces (3)
9. Smooth bitumen on concrete
10. E-krete overlay treatments-with and without sand (4)